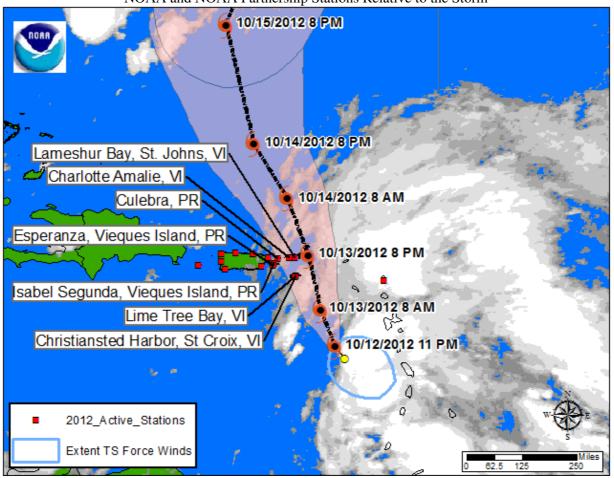


NOAA and NOAA Partnership Stations Relative to the Storm



## Storm Analysis

As of 10/13/2012 00:00 AST, water levels across the U.S. Virgin Islands and Barbuda are slightly elevated and range from 0.3 to 0.8 feet above tidal predictions. Wind speeds are generally below 10 kts with slightly higher gusts. Barometric pressure is slowly falling across the region.

Water Level and Meteorological plots available below are updated automatically. Water level predictions relative to <u>Mean Lower Low Water</u> are:

Christiansted Harbor, St Croix, VI: Next predicted high tides are 0.5 ft (0.17 m) at 10/13/2012 06:56 AST and 0.5 ft (0.15 m) at 10/13/2012 17:47 AST.

Lameshur Bay, St. John, VI: Next predicted high tides are 0.9 ft (0.28 m) at 10/13/2012 07:20 AST and 0.8 ft (0.25 m) at 10/13/2012 18:37 AST.

Lime Tree Bay, VI: Next predicted high tides are 0.7 ft (0.22 m) at 10/13/2012 07:24 AST and 0.7 ft (0.21 m) at 10/13/2012 16:35 AST.

Charlotte Amalie, VI: Next predicted high tides are 0.9 ft (0.27 m) at 10/13/2012 07:09 AST and 0.8 ft (0.25 m) at 10/13/2012 18:32 AST.

Culebra, PR: Next predicted high tides are 1.3 ft (0.38 m) at 10/13/2012 06:36 AST and 1.2 ft (0.36 m) at 10/13/2012 18:38 AST.

Isabel Segunda, Vieques Island, PR: Next predicted high tides are 1.3 ft (0.39 m) at 10/13/2012 06:51 AST and 1.1 ft (0.35 m) at 10/13/2012 18:53 AST.

Esperanza, Vieques Island, PR: Next predicted high tides are 0.5 ft (0.16 m) at 10/13/2012 06:18 AST and 0.5 ft (0.15 m) at 10/13/2012 17:36 AST.

For additional data, please see the <u>Center for Operational Oceanographic Products & Services</u> website. For information on Highest Astronomical Tide (HAT), NAVD88 and other datums, please see <u>Tidal Datums</u>. For more information or archived products and reports, please see the <u>Storm QuickLook</u> Homepage.

Analyst:PFF		

#### SELECT NATIONAL HURRICANE CENTER ADVISORY INFORMATION:

TROPICAL STORM RAFAEL SPECIAL ADVISORY NUMBER 1 NWS NATIONAL HURRICANE CENTER MIAMI FL AL172012 730 PM AST FRI OCT 12 2012

...LOW PRESSURE AREA OVER THE EASTERN CARIBBEAN SEA BECOMES TROPICAL STORM RAFAEL...

WATCHES AND WARNINGS

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CHANGES WITH THIS ADVISORY...

A TROPICAL STORM WARNING HAS BEEN ISSUED FOR THE U. S. VIRGIN ISLANDS.

A TROPICAL STORM WATCH HAS BEEN ISSUED FOR PUERTO RICO...CULEBRA...AND VIEQUES.

SUMMARY OF WATCHES AND WARNINGS IN EFFECT...

A TROPICAL STORM WARNING IS IN EFFECT FOR...

\* U. S. VIRGIN ISLANDS

A TROPICAL STORM WATCH IS IN EFFECT FOR...

\* PUERTO RICO...CULEBRA...AND VIEQUES

A TROPICAL STORM WARNING MEANS THAT TROPICAL STORM CONDITIONS ARE EXPECTED SOMEWHERE WITHIN THE WARNING AREA WITHIN 36 HOURS.

A TROPICAL STORM WATCH MEANS THAT TROPICAL STORM CONDITIONS ARE POSSIBLE WITHIN THE WATCH AREA...GENERALLY WITHIN 48 HOURS.

FOR STORM INFORMATION SPECIFIC TO YOUR AREA IN THE UNITED STATES...PLEASE MONITOR PRODUCTS ISSUED BY YOUR LOCAL NATIONAL WEATHER SERVICE FORECAST OFFICE. FOR STORM INFORMATION SPECIFIC TO YOUR AREA OUTSIDE THE UNITED STATES...PLEASE MONITOR PRODUCTS

#### **DISCUSSION AND 48-HOUR OUTLOOK**

\_\_\_\_\_

AT 730 PM AST THE CENTER OF TROPICAL STORM RAFAEL WAS LOCATED ABOUT 220 MI SSE OF ST. CROIX. RAFAEL IS MOVING TOWARD THE NORTH-NORTHWEST NEAR 12 MPH AND THIS GENERAL MOTION IS EXPECTED TO CONTINUE TONIGHT. A TURN TOWARD THE NORTH IS EXPECTED ON SATURDAY. ON THE FORECAST TRACK...THE CENTER OF RAFAEL WILL MOVE THROUGH THE EASTERN CARIBBEAN TONIGHT...AND THEN MOVE NEAR OR OVER THE VIRGIN ISLANDS SATURDAY OR SATURDAY NIGHT.

REPORTS FROM AN AIR FORCE RESERVE HURRICANE HUNTER AIRCRAFT INDICATE THAT MAXIMUM SUSTAINED WINDS ARE NEAR 40 MPH WITH HIGHER GUSTS. LITTLE CHANGE IN STRENGTH IS EXPECTED TONIGHT...WITH SLOW STRENGTHENING POSSIBLE SATURDAY THROUGH SUNDAY.

TROPICAL STORM FORCE WINDS EXTEND OUTWARD UP TO 150 MILES MAINLY TO THE SOUTHEAST OF THE CENTER.

ESTIMATED MINIMUM CENTRAL PRESSURE IS 1006 MB...29.71 INCHES.

#### HAZARDS AFFECTING LAND

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WIND...TROPICAL STORM CONDITIONS ARE EXPECTED ACROSS THE LESSER ANTILLES AND THE VIRGIN ISLANDS IN THE TROPICAL STORM WARNING AREA TONIGHT AND SATURDAY. TROPICAL STORM CONDITIONS ARE POSSIBLE OVER PUERTO RICO...CULEBRA...AND VIEQUES SATURDAY NIGHT AND SUNDAY.

RAINFALL...RAFAEL IS EXPECTED TO PRODUCE TOTAL RAINFALL AMOUNTS OF 3 TO 5 INCHES...WITH ISOLATED MAXIMUM AMOUNTS OF 10 INCHES...OVER THE LESSER ANTILLES AND THE VIRGIN ISLANDS. THESE RAINS COULD CAUSE LIFE-THREATENING FLASH-FLOODS AND MUDSLIDES...ESPECIALLY IN MOUNTAINOUS TERRAIN.

SURF...DANGEROUS SURF CONDITIONS ARE POSSIBLE IN THE LESSER ANTILLES AND THE VIRGIN ISLANDS TONIGHT THROUGH SUNDAY.

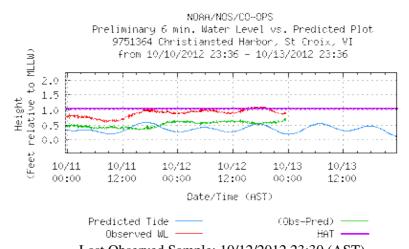
#### FORECASTER BRENNAN/BEVEN

For the purpose of timely release, data contained within this QuickLook have undergone a "limited" NOS Quality Assurance/Control; however, the data have not yet undergone final verification. All data subject to

# Tropical Storm RAFAEL QuickLook, POSTED 00:00 AST 10/13/2012 NOS verification.

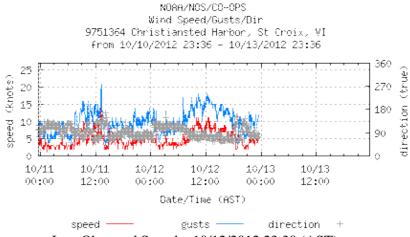
Jump to: Christiansted Harbor, St Croix - Water Level, Christiansted Harbor, St Croix - Winds, Lameshur
Bay, St. John - Water Level, Lameshur Bay, St. John - Barometric, Lime Tree Bay - Water Level, Lime Tree
Bay - Winds, Lime Tree Bay - Barometric, Charlotte Amalie - Water Level, Charlotte Amalie - Winds,
Charlotte Amalie - Barometric, Culebra - Water Level, Culebra - Winds, Culebra - Barometric, Isabel
Segunda, Vieques Island - Water Level, Isabel Segunda, Vieques Island - Winds, Esperanza, Vieques Island - Water Level, Esperanza, Vieques Island - Winds, Esperanza, Vieques Island - Barometric,

## Christiansted Harbor, St Croix, VI - Return to List



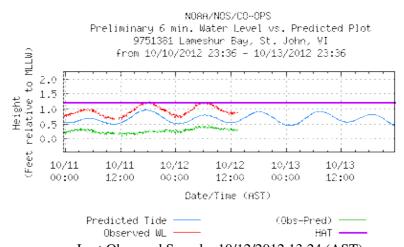
Last Observed Sample: 10/12/2012 23:30 (AST)
Relative to MLLW: Observed: 0.91 ft. Predicted: 0.20 ft. Residual: 0.71 ft. Historical Maximum Water Level: Oct 16 2008, 1.17 ft. above MHHW

## Christiansted Harbor, St Croix, VI - Return to List



Last Observed Sample: 10/12/2012 23:30 (AST) Wind Speed: 5 knots Gusts: 11 knots Direction: 71° T

## Lameshur Bay, St. John, VI - Return to List



Last Observed Sample: 10/12/2012 13:24 (AST)
Relative to MLLW: Observed: 0.88 ft. Predicted: 0.59 ft. Residual: 0.29 ft. Historical Maximum Water Level: Aug 30 2010, 0.9 ft. above MHHW

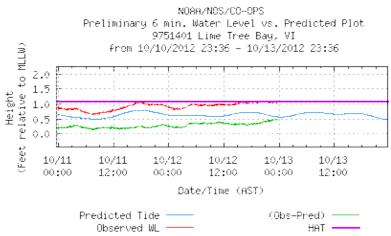
## Lameshur Bay, St. John, VI - Return to List

NOAA/NOS/CO--OPS Barometric Pressure Plot 9751381 Lameshur Bay, St. John, VI from 10/10/2012 23:36 - 10/13/2012 23:36 1016 1015 1014 (JE) 1013 1012 1011 1010 Pressure 1009 1008 10/11 10/12 10/13 1.0/11.10/12 10/13 00:00 12:00 00:00 12:00 00:00 12:00 Date/Time (AST)

Last Observed Sample: 10/12/2012 13:24 (AST)

Barometric Pressure: 1010.7 mb

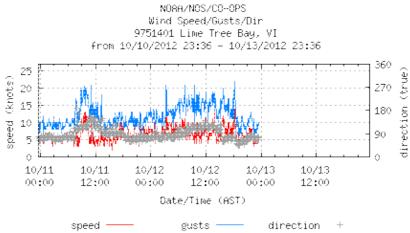
## Lime Tree Bay, VI - Return to List



Last Observed Sample: 10/12/2012 23:30 (AST)

Relative to MLLW: Observed: 1.03 ft. Predicted: 0.58 ft. Residual: 0.45 ft. Historical Maximum Water Level: Nov 17 1999, 1.88 ft. above MHHW

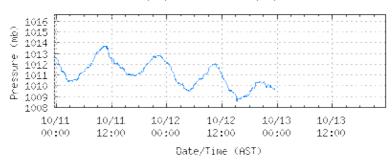
## Lime Tree Bay, VI - Return to List



Last Observed Sample: 10/12/2012 23:30 (AST) Wind Speed: 5 knots Gusts: 10 knots Direction: 68° T

## Lime Tree Bay, VI - Return to List

NOAA/NOS/CO-OPS Barometric Pressure Plot 9751401 Lime Tree Bay, VI from 10/10/2012 23:36 - 10/13/2012 23:36



barometric pressure ---

Last Observed Sample: 10/12/2012 23:30 (AST)

Barometric Pressure: 1009.7 mb

## Charlotte Amalie, VI - Return to List

NOAA/NOS/CO-OPS Preliminary 6 min. Water Level vs. Predicted Plot 9751639 Charlotte Amalie, VI from 10/10/2012 23:36 - 10/13/2012 23:36 2.0 1.5 1.0 0.5 0.0 10/11 10/12 10/12 10/13 10/13 10/11 00:00 12:00 00:00 12:00 00;00 12:00

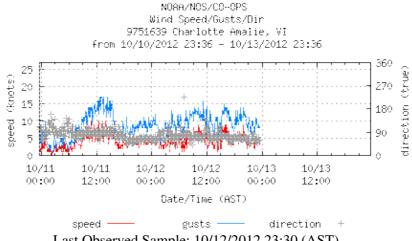
Height (Feet relative to MLLW)

Oate/Time (AST)

Predicted Tide (Obs-Pred) (Obs-Pred) HAT (Observed WL HAT

Last Observed Sample: 10/12/2012 23:30 (AST)
Relative to MLLW: Observed: 0.94 ft. Predicted: 0.50 ft. Residual: 0.44 ft. Historical Maximum Water Level: Sep 16 1995, 2.93 ft. above MHHW

## Charlotte Amalie, VI - Return to List



Last Observed Sample: 10/12/2012 23:30 (AST) Wind Speed: 3 knots Gusts: 8 knots Direction: 60° T

## Charlotte Amalie, VI - Return to List

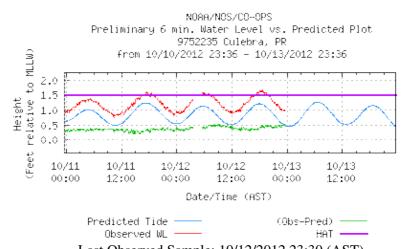
NOAA/NOS/CO-OPS Barometric Pressure Plot 9751639 Charlotte Amalie, VI from 10/10/2012 23:36 - 10/13/2012 23:36



barometric pressure ——
Last Observed Sample: 10/12/2012 23:30 (AST)

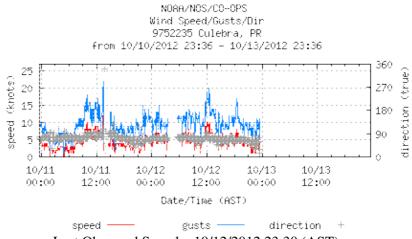
Barometric Pressure: 1010.5 mb

## Culebra, PR - Return to List



Last Observed Sample: 10/12/2012 23:30 (AST)
Relative to MLLW: Observed: 0.96 ft. Predicted: 0.48 ft. Residual: 0.48 ft. Historical Maximum Water Level: Nov 6 2006, 0.85 ft. above MHHW

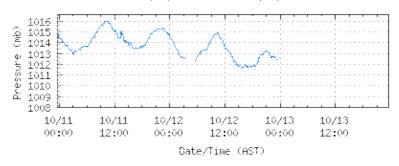
## Culebra, PR - Return to List



Last Observed Sample: 10/12/2012 23:30 (AST) Wind Speed: 1 knots Gusts: 5 knots Direction: 16° T

## Culebra, PR - Return to List

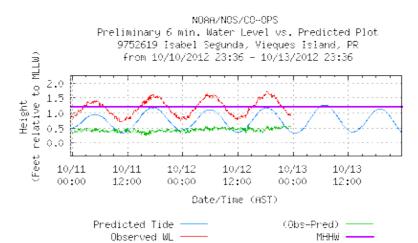
NOAA/NOS/CO-OPS Barometric Pressure Plot 9752235 Culebra, PR from 10/10/2012 23:36 - 10/13/2012 23:36



barometric pressure ——
Last Observed Sample: 10/12/2012 23:30 (AST)

Barometric Pressure: 1012.4 mb

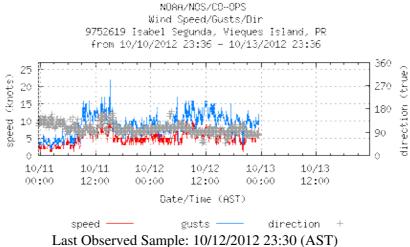
## <u>Isabel Segunda, Vieques Island, PR</u> - <u>Return to List</u>



Last Observed Sample: 10/12/2012 23:30 (AST)

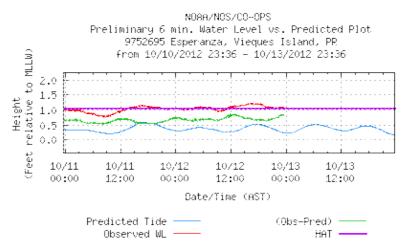
Relative to MLLW: Observed: 0.92 ft. Predicted: 0.37 ft. Residual: 0.55 ft. Historical Maximum Water Level: , 0 ft. above MHHW

## Isabel Segunda, Vieques Island, PR - Return to List



Wind Speed: 8 knots Gusts: 12 knots Direction: 85° T

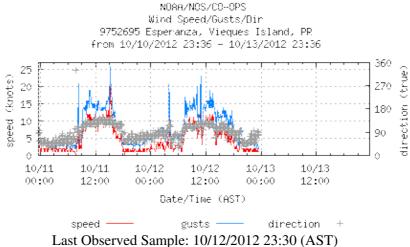
## Esperanza, Vieques Island, PR - Return to List



Last Observed Sample: 10/12/2012 23:30 (AST)

Relative to MLLW: Observed: 1.10 ft. Predicted: 0.25 ft. Residual: 0.85 ft. Historical Maximum Water Level: Aug 22 2011, 1.04 ft. above MHHW

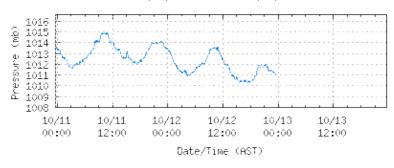
## Esperanza, Vieques Island, PR - Return to List



Wind Speed: 1 knots Gusts: 2 knots Direction: 89° T

## Esperanza, Vieques Island, PR - Return to List

NOAA/NOS/CO-OPS Barometric Pressure Plot 9752695 Esperanza, Vieques Island, PR from 10/10/2012 23:36 - 10/13/2012 23:36



barometric pressure ——
Last Observed Sample: 10/12/2012 23:30 (AST)

Barometric Pressure: 1011.1 mb

Center for Operational Oceanographic Products & Services (CO-OPS) | National Ocean Service (NOS) National Oceanic and Atmospheric Administration | U.S. Department of Commerce